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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/983,057	10/23/2001	Isao Tsuruma	Q66788	8940

7590 08/27/2003

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EXAMINER

LEE, JOHN D

ART UNIT PAPER NUMBER

2874

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/983,057

Applicant(s)

TSURUMA, ISAO

Examiner

John D. Lee

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 and 11-14 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1001.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Receipt is acknowledged of papers submitted under 35 U.S.C. §§ 119(a)-(d), which papers have been placed of record in the file.

The seven (7) sheets of formal drawing filed with this application on October 23, 2001, are acceptable.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, and 10 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by U.S. Patent 5,652,674 to Mizuuchi et al. Regarding claims 1 and 2, Mizuuchi et al discloses a wavelength converting element comprising an optical crystal substrate, inverted domains formed through the entire thickness of the substrate, and a waveguide which intersects the inverted domains and which can be formed by ion or proton implantation (see column 21, lines 1-4, column 24, lines 20-26, and column 39, lines 9-13). With respect to claims 3, 4, 9, and 10, Mizuuchi et al discloses methods of manufacturing a wavelength converting element like that of claims 1 and 2, wherein the waveguide can be formed either before or after the inverted domains are formed (see column 39, lines 19-27). Note also that in all embodiments of Mizuuchi et al, the waveguide is a sub-surface waveguide, meaning that it is formed at "an interior" of the optical crystal substrate.

Claims 5-8 and 11-14 are allowable over the prior art of record. Mizuuchi et al is the closest prior art document of record and, as evidenced by the rejection above, discloses the basic proton implantation waveguide-forming technique being claimed. Mizuuchi et al does not, however, disclose or reasonably suggest the specific sequence of steps of the method set forth in claim 5. Claim 5 and all claims depending therefrom are thus allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other wavelength converting elements comprising optical crystal substrates, inverted domains formed in the substrates, and waveguides which intersect the inverted domains, along with methods of manufacturing such wavelength converting elements (some involving ion implantation), can be seen in the cited U.S. Patents to Hatakoshi et al, Arvidsson et al, Nihei et al, Yoo, Yamamoto et al ('471), Webjorn et al, and Yamamoto et al ('990), and in the cited Japanese Patent to Kaimoto.

All three of the prior art documents submitted by applicant in the Information Disclosure Statement filed on October 23, 2001 have been considered and made of record. Note the attached initialed copy of form PTO-1449.

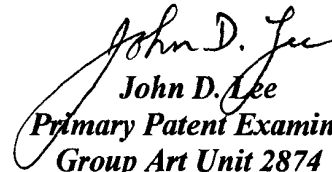
Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (703) 308-4886. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to

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the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874